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TRANSLATIONS ON USSR TRADE AND SERVICES
(FOUO 3/79)









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INTERNATIONAL ECONOMIC RELATIONS

DISCUSSION ON THE TRANSFERABLE RUBLE

Stuttgart OSTEUROPA WIRTSCHAFT in German No 3, 1978 pp 203-216

[Article by Rainer Doh examining whether the transferable ruble fulfills the functions that would justify it as an international currency, etc]

Introduction

[Text] "Foreign trade between the socialistic planned economies of Eastern Europe cannot readily depend upon the categories of the market. As in the field of the national economy, market categories such as price and money are instruments ("levers") of the dominant planning system. Since the countries unified in the Council for Mutual Economic Assistance (CEMA) have no total overall plan, because national sovereignty (including planning power) is protected, a fact which, in the face of existing conflicts of interest is neither strange nor always successful, the CEMA is left to prices and money; even in the CEMA nothing is free. If there is trade between the states, and if one does not wish to stay with direct barter, then the various flows of goods must be charged and paid for respectively. For this purpose the CEMA countries have created a special international currency, the transferable ruble (TRb1) and an institution which calculates international trade in the CEMA, the International Bank for Economic Cooperation (IBEC, founded in 1963). Both are the basis for multilateral exchange of payments in the CEMA.

While Western literature in general is very critical and doubtful about the monetary properties of the transferable ruble, the common international currency of the member countries of the Council for Mutual Economic Assistance—it doubts whether the TRbl is real, genuine money!—Eastern literature (above all in the GDR and the USSR) usually does not raise this question. Here it is considered obvious that the TRbl is "real money" and not just a calculating unit, that the TRbl "by its nature can fulfill all the functions of an international currency," and therefore does not have to be afraid of a comparison with other (that is, Western) international currencies. Difficulties in the use of the TRbl are not found to stem from its "nature" but from the fact that "it does not yet fulfill its essential functions completely." In agreement with this, another passage runs:

1

"The transferable ruble fulfills in accordance with its nature all the main functions of an international socialistic currency: measurement of values, means of payment and of accumulation."

But what makes the TRb1 into an international currency of <u>socialistic</u> nature—which must be understood in the sense of a limitation—is not <u>that</u> it fulfills these functions, but how it fulfills them [underscoring here and later indicates italics].

National and International Money in CEMA

Unlike the situation in the West, national monetary spheres in CEMA countries are isolated from one another. Since monetary flows are integrated nationally into the system of economic levers and function as parameters of national economic planning, they are of necessity dependent upon the area of their validity for their effectiveness; payments, etc, cannot be realized without an additional arrangement in the plan. As a result, the currency monopoly, which is a necessary element in the system for directing the economy, hinders international effectiveness of the national socialistic money. Without currency monopoly the domestic circulation of money would be subject to unplanned external influences. Just as there is no international price connection in the CEMA (prices, too, are planning parameters), there is also no "monetary connection" in the sense that the currency of a country can serve as a means for settlement of claims. The national currencies of CEMA countries are therefore purely domestic currencies.

The fact that money of CEMA countries cannot be effective in foreign economic relations shows a basic fault in this money: none of the national currencies serves as a general calculating unit and as a general means of payment in the CEMA standard.

This fault also appears in the postulates of Marxist theory upon which the monetary theory in CEMA countries is based. When, here, money is defined as "general equivalent...for mediation between production and circulation of goods"5--in Marx as the "absolute" or "general goods"--then money limited in foreign use is no longer really a "general equivalent" for all goods. Such money, however, which according to Marx is "the necessary evidence of the immanent measure of value of goods, worktime," and therefore would have to be independent of the limits of a national planning area, would have to exist in CEMA countries as a consequence of Marx' "Law of Value," which is valid as a leading principle in socialist planned economies.

Marx himself emphasized in this connection that the "flight" of money from the area of the domestic economy and the fulfillment of a function as a general means of payment independent of national borders and national state peculiarities is a consequence of his concept of money. "World money functions as a general means of payment, and means of buying and of social

evidence of wealth in general." But this "world money" has a direct connection to national money. It is domestic money that divests itself of its national form and thereby becomes international money--"world money." Domestic money which cannot take such a step is therefore not "world money," and furthermore--because this is a consequence of Marx' concept of money--it is only money of limited use.

On the other hand, with this limitation of the functional capability of the money to the area of the domestic economy, an essential condition is lacking for the development of intra-CEMA trade on a multilateral basis: exchange relationships are accompanied on a bilateral basis without recognition by a third country. The lack of a money which could provide a common denominator for outstanding debts, and which would make their multilateral payment possible, made the necessity of first having a bilateral clearing which showed a considerable hindrance of the international distribution of labor in the CEMA. As a solution to these faults, however, the reasons for lack of internationalization of the money were not removed (that is, above all, the planning systems which are isolated from one another and which are directed toward national interests), but rather alongside domestic currencies, an international currency was established—the transferable ruble—on the basis of which multilateral foreign economic relations were to develop.

The TRb1, then, is international money without being national money, and it is therefore, just as the national money of the CEMA countries, neither an international currency in the Western sense, nor "world money" in the Marxist sense. It cannot even live up to the often-used concept of "World Money Representative," because the TRbl lacks essential qualities which would enable it to represent "world money." The fact that the TRb1, as it is claimed in the Eastern literature, is "the first really collective currency in the world,"10 is the expression of a lack, since the TRbl is not simply a real but rather only a collective currency! Therefore, by means of the central handling of all international payments in a common currency in the International Bank for Economic Cooperation (IBEC), the desired multilateral nature of trade and payment could not be accomplished: over 90 percent of intra-CEMA trade is developed and calculated on a bilateral basis, although this payment takes place formally for all countries in TRbl. This is also admitted in the East: "Each country balances its payments not unconditionally"(!) "bilaterally;" "for the planning period as a whole, however, each country strives to balance out its payments with the other countries in their totality by means of payment of the account balance with each country."12

TRbls arise in the IBEC only on the basis of flow of goods—this is what is meant by the "goods coverage" of the TRbl. "Transferable rubles arise primarily only from the export of goods and services from one country into others." Since the imports and exports are basically planned to be balanced bilaterally, a balancing and a credit of TRbls beyond the current payment (short-term credit) can only occur outside the regular plan;

TRbl reserves or credits presuppose, then, deviations from the plan or arise because of periodic lack of synchronization of deliveries of two partners (automatic credit). In the process, the previously planned yearly balance of accounts is done away with. However, these unplanned TRbl credits are, within the framework of intra CEMA trade, which is developed on the basis of planning, not directly usable. These problems are generally skipped over in the Eastern literature; thus it is said:

"The TRb1 is freely transferable and can be transferred from the account of a member country of the IBEC to the account of another. This currency can be used without exception in all CEMA countries. This means that each country can use the proceeds from the export of its produc : in TRb1 freely for the payment of imports from every other country which lakes part in the multilateral payments service."15

However, this transferability transpires within the framework of the bilaterally (ex ante) adjusted balances and quotas. A country that has TRbls "assures itself the possibility of buying goods for this currency beyond the balanced deliveries...."

But whether the possibility of such purchases also leads to actual purchases depends upon more than simply the existence of a corresponding amount of TRbl credit:

"If the deliveries vary from the plans agreed upon among the countries... the accumulated funds for the planning period are used for the payment of free goods of the member countries of the CEMA which exceed the plan in their mutual exchange." 17

For this, however, it is first necessary that such reserve goods exist at all in the necessary amounts, so that variations from the plan in one direction are balanced by variations in the other. For this, reserve goods would have to be built up (increasing prices to cover excess demand will not work for planned export trade), whereby such a "collective reserve" naturally would create resistance in the creditor countries, since this reserve would not demand payment discipline. Also, the roundabout way of disposing of such a reserve on the world market would create difficulties, because CEMA generally lacks goods suitable for the world market, and since for this very reason one would not want to put them—if they are available—into a reserve fund. 18

The resolution of such unplanned-for TRbl credits, which are identical with automatic credits, is therefore only possible by means of planned deliveries of goods and services by the borrowers, for in the domestic market nothing can be bought with TRbls--the foreign economic monopoly is not touched by the general balancing operations. Therefore this "free utilization" of TRbls does not exist. But here authors, particularly from the Soviet Union and the GDR, are of a different opinion:

"It cannot be concluded from the planned arrangement of economic relationships of CEMA that there is no free purchase of goods in a given member

country, and that the TRb1 therefore cannot become completely effective in its functions. $^{\prime\prime}20$

To this objection it must be said that free purchase cannot at all belong to the functions of the TRbl, that it can only exist, by nature of the system, as an exception, a fact which, to be sure, does not mean that the TRbl cannot completely fulfill its functions. The TRbl, which was created and determined by the planned economic system, cannot have the function of a freely usable currency in the model of a market economy—the TRbl cannot fulfill functions not postulated in its foundation; thus the objection of Berk/Seidel is meaningless.

The limitation of the payment function of the TRbl to be sure is noticed only by countries capable of producing surpluses. This system of payments is a disadvantage for the potential creditor countries because surpluses lead to automatic credits, the criterium of which is not their profitableness.

Credits which are automatically produced, and which arise of necessity in the payment of bilateral accounts, contradict the principle that foreign trade should make a maximum contribution to the national income; if there are no economic calculations as a basis for the credit, but if it rather must be granted because the partner with the return delivery is late, then the efficiency and profit of the foreign trade is hurt. The positive balances in TRbls in the IBEC are not used because the creditor country is interested in a reserve, because he is counting on long-range use of the balance or because he considers the interest to be profitable, but rather because they were built up in an unplanned way and can be used only in a planned way.

From the viewpoint of the debtor country this disadvantage becomes an advantage. Deviations from foreign trade plans which lead to unplanned deficits in the balance of payments do not result in the appearance of unplanned demands from abroad, and the import plans can still be realized. Credit, which the creditor would not provide if economic calculations were the decisive factor, becomes an advantage to the debtor, since he obtains the credit under relatively favorable conditions.

Accordingly, then, improvement of the present system of payments is an area of mutual national interest. Here there are some countries who favor an efficient currency system²¹ with profitably functioning interest rates and with at least a partially existing convertibility of TRbl credits into gold and convertible currencies (Poland, Hungary), and there are other countries which are only interested in perfecting the existing system of payments, because they understandably do not want to have to pay high interest rates—even if the latter are economically justified—for their generally negative account balances, but would rather look upon the credits as functions for technical bridging and evening—out of payments. The interest policy of the IBEC therefore shows a continual search for compromises in the opposing interests of creditor and debtor countries.

In this connection it should be noted, however, that the allocation of resources and the mutual delivery of goods are not directly influenced by interest policy, since the amount of interest in the trade relationships of the CEMA countries is not a direct tax rate—the accounts which are to be subject to interest appear ex post as plan deviations. 22 But an indirect influence can still arise if foreign trade planning should, for example, anticipate the advantages of a low interest rate policy, and, say, in bilaterally balanced planned exchange, set exports unrealistically high in order to take advantage in this way of the automatic payment credits.

In spite of many past technical improvements in the system of payments, the basic problem which was supposed to be solved by the TRb1 has had to remain unsolved. Now as before, money—also as international money—plays no independent role in the socialistic planned economy but is rather subordinated in essential points as the means of planning. This problem is one created by the system and characterized by it, and cannot be solved by technical—organizational reforms or by the creation of new institutions.

The Value of the TRb1

On the basis of its foreign trade monopoly and its economic implications, gold parities and exchanges rates in the CEMA have a different position than they have in market economy countries. As with all other economic categories, they are not independent in the planned economy system but rather function as "economic levers" as means of planning.

The fact that in the agreement on the multilateral payment in TRbls a fixed gold content was established for the TRb1 at 0.987,412 grams of fine gold, but that at the same time the TRbl is not exchangeable into gold, led Western authors to say generally that this gold content of the TRbl is "fictional."23 But the maintenance of a gold standard not only for the TRbl but also for all domestic currencies in the CEMA cannot be explained simply by ideological motivation. 24 The CEMA countries, to be sure, determine independently the gold content of their currencies and of the TRb1, i.e., the gold price does not arise as a balance price on the market, but this fixed gold content still makes a formal comparison with Western currencies possible. The important thing here is the acceptance of world market prices for the CEMA price system. Here it is not necessary that TRb1 credits actually be exchangeable for gold--the Eastern literature speaks in this connection continually of gold content or gold parity and not of gold coverage. Since there is no integration of the TRb1 in the international currency markets, gold parity is the only possibility of creating a relationship to the dollar which is independent

On the other hand, independence from gold is found in planning which makes a variation of the monetary value from the gold value, and therefore the

autonomous determination of gold parity, possible. What the following says for the gold standard of the domestic currencies is also valid for the TRb1:

"Although the prices of goods are expressed in gold, their movement is relatively independent of the changes in the value of gold itself." 26

With this it is also possible to maintain "false," i.e. economically unfounded, relationships to gold and to the convertible currencies; the "relative independence" of the TRb1 from gold means that only very large variations have to be corrected from time to time: "The inner economic connection between the value of gold and the price level becomes particularly evident when the variation continually increases."27

Thus a dilemma arises: the gold content of the TRbl is first set independently of the market and made subject to planning (state gold monopoly); nevertheless the planning must somehow be related to the market value of gold in order to be able to apply it at all. Only then is "gold in socialism a means of conscious fixing and changing of prices..." For the TRbl this means that it has only an economically founded relationship to Western currencies when it is related to the market value of gold, but that it is then divested of its value for planning.

Since on the other hand the role of gold in the Western currency system is being reduced, above all in its significance as a reference figure for currency parities and as a general calculating unit, gold seems to be a doubtful vehicle in the long run to form a solid basis for the calculation of TRbls into Western currencies.

On the basis of the gold standard of the TRb1, it would have been expected that in the past the inflationary developments of the Western currencies would have to have led to a continual upward valuation of the Eastern domestic currencies and of the TRb1; in other words, to maintain the stability of the currencies a "flexible exchange policy" would have to have taken place. ²⁹ In the opinion of the Polish economist Raczkowski, however, such exchange and price revisions should take place only when the present overvaluation of the TRb1 is removed. ³⁰ The existence of a "substantial" overvaluation of the TRb1 is hereby not only recognized in Western literature ³¹ but is also expressed implicitly in Eastern sources when, for example, it is said with reserve that the TRb1 rate must "become realistic." ³² Authors who expressly emphasize that the TRb1 rate is realistic still throw some doubt on the matter themselves when they call for a "confirmation of the reality of the exchange rate." ³³ Or, expressed another way:

"At present the CEMA countries are working on the establishment of economically based and mutually agreed-upon relationships of their currencies to each other and to the transferable ruble." 34

This is a remarkable confession of what these relationships at present are <u>not</u>: economically founded and mutually agreed upon.

Even if the economic justification of the exchange rate of the TRbl to, say, the U.S. dollar, is controversial and disputed, yet even if it is doubtful whether on the basis of diverging planned price structures an economically based exchange rate can exist at all—the projects mentioned by Faddejew have been going on since 1964 and no end is in sight—nevertheless such a relationship, which is to a great extent administrative, is in fact used for the calculation of world market prices into TRbl prices.

Since the total intra-CEMA trade is caught up in world market prices, the exchange calculation (independently of all East-West business) is of great importance for the CEMA. If a deviation from the result is necessary for planning reasons, this can also take place by way of modification and settlement of world market prices and must not take the form of a change in the exchange rate. 35 When one talks about a deviation of the world market prices from the contract prices in CEMA, then taken literally this means that an unchanged exchange rate is imputed.

Since each one of the domestic currencies in the CEMA has a gold parity, just as the TRbl does, the so-called official exchange rates can be determined from it. The rates and coefficients used in commercial trade, however, do not correspond to these official rates, because direct comparison of the currencies cannot be accomplished by such centralized rates.

The relationship between domestic and foreign trade is accomplished according to the preferences of state planning through the foreign trade monopoly, so that the exchange calculation of, say, the proceeds of a TRb1 export into a domestic currency, is influenced "according to plan" by the application of special rates and coefficients which are differentiated according to countries and currency structures in question.

Exchange Rates and Coefficients

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The official exchange rates do not reflect the relative buying power of the currencies. The actual calculation comes by way of the differentiated rates and coefficients that are said to be, say, between Poland and other CEMA countries, 2.7 to 5.7 times higher than the official rates. 36

Coefficients and rates are different in that the latter are based on international agreements and therefore always valid between the national currencies and between them and the TRbl respectively, while the "currency exchange coefficients" are internal calculation figures.³⁷ There is no agreement in Eastern literature on how the exchange rates come about. Thus according to Huber the rates are average prices which arise from "thousands of price comparisons."³⁸ But Ehlert and Luchterhand come to the opposite conclusion: "...with the lack of economically founded and mutually agreed upon rates between the TRbl and the national currencies of the member countries, (it is) hardly possible to make precise comparisons of costs and

prices."³⁹ Here, then, lack of rates hinders price comparison which is what Huber says leads to the rate. From this we can see that the national prices are not comparable; when there are diverging price structures, there can, under these conditions, be no unified buying power parities. The necessary administrative setting of rates therefore always includes a certain amount of arbitrariness which allows room for conflicts and for the introduction of national interests. From this one can get the impression that it is a problem of lack of agreement among partners. But this is rather the consequence of lack of unified buying power parities in CLMA. From this, consequences arise for the utilization of these rates: "At present the rates have extremely conditional character; their practical effectiveness is more or less limited."41

In practice, the exchange rates become effective only in connection with the coefficients; only through them does the TRb1 come into connection with the domestic currencies. The latter are changed by a coefficient system in accordance with the way planning wants the foreign trade structured, according to the structures for the goods and regions.

By means of the differentiation between rates and coefficients, i.e. by the double exchange calculation, there arise alongside the domestic currencies so-called foreign currencies (exchange mark, etc). The exchange mark, for example, is defined as follows:

"Calculating unit for the exchange calculation of world market prices of exports or imports expressed in foreign currencies. The VM [Valutamark (exchange mark)] is above all a planning coefficient.... It has significance for price adjustment and for evaluation of the profitability of foreign trade."⁴²

The exchange mark is therefore not an independent currency unit, but rather a connection between domestic and foreign currencies. Domestically the exchange mark is connected with the national currency by way of the differentiated coefficients. In this way the relationship between domestic and foreign currency (for example, between the exchange mark and the mark of the GDR) is of variable greatness, 43 and depends upon the coefficient structure at the time. This relationship influences the structure of foreign trade, but, conversely, the latter does not influence the relationship of domestic and foreign currency, even if presented this way in the final result and repercussions arise.

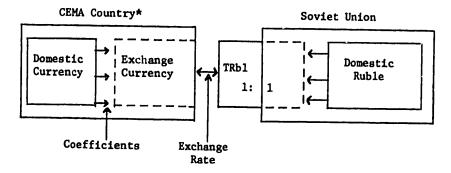
The significance of the foreign currency for price adjustment is that the coefficients of foreign trade and its structure are regulated (along with other instruments) for the businesses engaged in foreign trade so that a profitable state-desired foreign trade comes about on the basis of economic calculations and economic levers, although without application of these coefficients it would not be profitable. This discrepancy must be eliminated by means of a price adjustment. The difference between domestic and foreign trade prices, and therewith also the coefficients, is financed by

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the national economy. If there are positive differences they are paid over to the government. In this way, by subsidies or skimming off of excess profits, the profitability of foreign trade is influenced.

In the Soviet Union there is a peculiarity of this rate and coefficient system because the Soviet domestic ruble and the TRb1 formally have the same gold content and can be calculated in the relationship of 1:1. In spite of the formal agreement, the TRb1 is however an exclusively intrastate currency and not usable in the Soviet Union. The difference for the domestic ruble comes from the use of the coefficients which modify the exchange rate from 1:1. But the Soviet foreign currency must not be calculated in TRb1 through the mediation of a special exchange rate; TRb1 "exchange rubles" are formally the same but are differentiated by their economic character.

Schematically, the exchange calculation system of the CEMA countries can be represented as follows:



The adjustment of undesired exchange rates by means of coefficients can, to be sure, insure the control of foreign trade, but the national economy suffers. Since the exchange rates and coefficients have a "redistribution" function, 4 the exchange rate as an average figure does not bring all partners the same benefit, and here, too, conflicts of interest arise; each country would like to ensure itself the greatest possible benefit in the determination of such average figures.

If in fact—as prospects have variously been set forth—by 1979 there are unified exchange rates for all payments, this will also require a change in existing price structures, 45 which will, however, hurt the national interests of various CEMA countries; therefore the realization of such plans in the face of the present situation in the CEMA must seem doubtful. According to an older suggestion by Kuehne, the complete agreement of domestic and foreign currencies should come about in order to cllow international monetary relationships to have full sway in the domestic economy.

The balance of payments is supposed, in the process, among other things, to be assured by means of a "balance of payments oriented domestic price structure" which, in the long run, would lead to an approximation of the domestic price structures. This suggestion points to the dilemma which exists here: removal of the isolation of the monetary comestic circulation would imply an end to government price-setting—it could only be maintained if it were adjusted to the situation, and if it did this it would itself become superfluous. In view of the priorities of the CEMA countries, such suggestions are not in agreement with the present economic system, since they point toward an end to sovereign economic planning.

Under present conditions, rates and prices are not the main criteria of Intra-CEMA trade, but rather the agreed-upon contingents among the states. But in order to be able to balance and calculate the latter evenly, an evaluation of both sides of the balances must be possible. This evaluation in TRb1 prices, however, does not come over an international market but rather in bilateral negotiations, the mechanism of which can lead to different prices for homogenous goods as well as to special conditions of the products (quality, technical standard, etc) not being expressed properly. Therefore, within the framework of bilateral balancing, goods are adjusted as "hard" and "soft," because it is not possible to express in the price the existing differences such as quality, technical standards, etc., for example, between groups of goods such as machines and agricultural products. The appearance of the CEMA contract prices and their connection with planning prevent the TRb1 from being the common denominator for all goods which could express all qualitative differences quantitatively with the result that the TRb1 could really be a "general equivalent." Thus the IBEC credit balance in TRbl is dependent on the value the goods being delivered at the time which forms the basis of their existence. As a result of this, the lack of a balanced price system forces the countries to bilateral behavior: an excess of TRbls becomes less valuable when it is carried over to a third partner or when it has been obtained from "hard" goods and must be used for "soft" goods; thus, planning always strives for equal balances. "Under these circumstances the CEMA countries would, in the case of a non-bilateral, multilateral trade adjustment, after a mutual adjustment of accounts, be unequally rewarded or neglected."48 Disadvantages would accrue to all countries that exported "hard" goods with a relatively high degree of world marketability, while on the other hand the countries that mainly exported "soft" goods in the CEMA area would gain certain advantages, or they could reduce their poorer competitive position in the CEMA. In this respect bilateral balancing, under the given circumstances, better suits the interests of the more highly developed CEMA countries—at least as long as it is not possible properly to express the qualitative differences of the goods in the price.

If sums earned in foreign trade are not comparable because of the conversion by means of exchange rates, then a monetary grasp of the efficiency

of foreign trade is practically impossible. To be sure, by means of the coefficient system, foreign trade can be integrated into the system of economic accounting, so that for the business firm the profitability of its foreign trade can be determined, but only after transformation of the foreign trade proceeds into a domestic economy figure with inclusion of the adjustment through the national finance office. The concept of a people's economic foreign trade profitability as a "monetary expression of the directly beneficial effects of foreign trade in relation to the expenditure" is not clearly possible, because one and the same "economic beneficial effect" can have a completely different "monetary expression," i.e., a credit in TRbls as such does not allow any inference about the profitability of the underlying transactions. The determination of foreigh trade profitability is therefore bound to the limits of bilateral trade relationships; of a profit comparison between several countries is not possible. The basic subordination of monetary categories to planning, which is expressed in the obvious difficulties of the TRbl, makes a subordination of the monetary grasp of foreign trade efficiency under the criterium of plan fulfillment necessary.

Convertibility of the TRb1?

It has been shown in the above discussion that the TRb1 can neither be converted into Western currencies nor into the national currencies of the CEMA countries. (In the following discussion, convertibility means the latter.) The domestic character of the currencies, the dominance of the planning categories, and the lack of international price correlation forcefully hinder an optional transferability of the TRb1 independent of the use or the origin of the amount--and this is what one must understand by the term convertibility. The TRbl as an international currency independent of the national currencies is the result of their inconvertibility (see above). Since the domestic currencies could not be used for international payments and could not come into direct correlation, there was the necessity of creating an international currency which could only be used for international payments. But a convertibility of the TRb1 with the national currencies of the CEMA becomes under these circumstances a contradictio in adjecto. If the TRbl could namely be exchanged at will for each of the national currencies, then the same would be true for them with each other, and there would be no reason not to use their own international currency alongside the national currencies for international payments. The convertibility which is to be reached by reform of the price and currency system as well as by an approximation of the price structures cannot concern the TRb1 but only the national currencies. If this were successful, the TRb1 would become superfluous.

It is therefore not strange that in creation of the convertibility of the TRbl, which was discussed in the "Complet Program" for 1980, 51 no essential progress could be made. Under these circumstances an external convertibility of the TRbl is also illusory, no matter how advantageous it may seem to be in the East. A currency that is inconvertible in its own area and

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that is dependent upon national foreign trade planning for its usability, and which is just <u>no</u> "general equivalent," cannot be freely exchangeable into currencies which, with all their weaknesses, at least have these qualities.

The TRb1 as a Calculation Unit

If, up to now, it has been established that the TRb1:

- --exists as a collective currency separated from the domestic currencies,
- -- is only applicable in connection with planning,
- --as a means of technical simplification of the accounting process cannot make the process multilateral,
- --stands in no economically fully grounded relationship to gold and to Western currencies.
- --represents differing values in credits at the IBEC,
- --is neither convertible into the national currencies of the CEMA countries nor into foreign bills of exchange,

then the doubts mentioned at the beginning about the monetary qualities of the TRbl seem more than justified. But this does not mean that the TRbl cannot fulfill any monetary functions at all and that it is no money at all but only a calculating unit. There is no contradiction here, for the TRbl is, as a calculating unit, also the bearer of monetary functions; but it fulfills these functions only in the framework established by planning, and not generally.

Since the TRb1 underlies the (bilateral) settlements and thus functions as a calculating unit, it is the common denominator of the balanced streams of goods to the extent that this calculation functions. Within this framework it can also mediate payments. Even if the realization of TRb1 credits requires planned equivalents, the TRb1 is still the common denominator of credit and equivalent which it adjusts together. The fact that this leads to the difficulties mentioned, because there is really no objective measure for the value of the TRb1 does not mean that this calculation does not take place in a practical way within the framework of its naturally limited form.

Thus the concept of the calculating unit presupposes certain rudimentary monetary functions, without which trade in the CEMA countries would not be possible.

FOOTNOTES

- 1. Cf. A. Zwass, "Konvertibilitaet im RGW-Raum?" [Convertibility in the CEMA Area?], in KONJUNKTURPOLITIK 1970 pp 367 ff.
- Faddejew, "Der Rat fuer gegenseitige Wirtschaftshilfe [Council for Mutual Economic Assistance]," Frankfurt 1975 p 279. However, critical reviews of this have appeared in Hungary, Poland and Czechoslcvakia.
- 3. Ibid. p 280.
- 4. Garbusow, "Die Vervollkommung der Waehrungs--und Finanzbeziehungen der Mitgliedslaender des RGW" [The Perfection of the Currency and Financial Relationships of the Member Countries of the CEMA] in "Internationale sozialistische Waehrung der Mitgliedslaender des RGW" [International Socialistic Currency of the Member Countries of CEMA], Berlin 1974 (Moscow 1972).
- 5. "Autorenkollektiv, Woerterbuch der Oekonomie--Sozialismus" [Collected authors, Dictionary of the Economy--Socialism], Berlin 1969 p 302.
- 6. Cf. K. Marx, "Das Kapital," Vol 1 p 83.
- 7. Ibid. p 109.
- 8. Ibid. p 157.
- 9. Cf. A. Zwass, "Zur Problematik der Waehrungsbeziehungen zwischen Ost und West" [Concerning the Problems of Currency Relationships between East and West], Vienna 1974.
- 10. Konstantinow, "Dichtung und Wahrheit ueber den transferablen Rubel" [Poetry and Truth Concerning the Transferable Ruble], in "Internationale Sozialistische Waehrung" [International Socialist Currency] op. cit.
- 11. Cf. Stelz1, "Die internationalen Banken des RGW" [The International Banks of CEMA], Muenchen 1973.
- 12. Schein, "Die kollektive Waehrung der Mitgliedslaender des RGW und die Wege ihrer Vervollkommung" [The Collective Currency of the Member Countries of the CEMA, and Its Path to Perfection] in "Internationale sozialistische Waehrung" [International Socialist Currency], op. cit. p 41.
- 13. Faddejew, op. cit. p 279.
- 14. Cf. A. Swass, "Convertibility...." op. cit.

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- 15. Konstantinow, op. cit. p 27.
- 16. Rotleider, "Der transferable Rubel--die internationale sozialistische Waehrung der RGW-Laender" [The Transferable Ruble--International Socialist Currency of the CEMA-Countries], in "International sozialistische Waehrung...." [International Socialist Currency] op. cit. p 21.
- 17. Schein, op. cit. pp 39 ff.
- 18. Cf. ibid. p 47.
- 19. Cf. A. Zwass, op. cit. p 102.
- 20. Berk/Seidel, "Theoretische Probleme der Valuta--und Kreditbeziehungen im sozialistischen Weltsystem" [Theoretical Problems of Currency and Credit Relations in the Socialist World System], in WIRTSCHAFTSWIS-SENSCHAFT 7/1974 p 1069.
- 21. Cf. A. Zwass, op. cit. p 103.
- 22. Cf. ibid. pp 102 ff.
- Cf. Steffens, "Integrationsprobleme im RGW" [Integration Problems in the CEMA], Hamburg 1974 p 79.
- 24. Cf. the equation of gold and money in Marx, op. cit. p 109.
- 25. Cf. A. Zwass, op. cit. p 383.
- 26. Autorenkollektiv, "Lehrbuch Politische Oekonomie--Sozialismus" [Collected authors, Textbook for Political Economy--Socialism], Frankfurt/Main 1972 (Moscow 1970), p 275.
- Autorenkollektiv, "Politische Oekonomie" [Collected authors, Political Economy], Vol 3, Berlin 1973 p 327.
- 28. Autorenkollektiv, "Lehrbuch..." [Textbook...], op. cit. p 275.
- Cf. H. Machowski, "Packt die Inflation jetzt auch den Osten?" [Is Inflation now Reaching the East?], in WIRTSCHAFTSWOCHE, 1974/15.
- Raczkowski, "International Money of the Socialist Countries," in OECONOMICA POLONA 1975/5, pp 325 ff.
- 31. Cf. Hewett, "Foreign Trade Prices in the CEMA," Cambridge 1974.
- 32. Raczkowski, op. cit. p 324.
- 33. Garbosow, op. cit. p 30.

- 34. Faddejew, op. cit. p 281.
- 35. There are many possibilities for this; cf. Hewett, op. cit. pp 30 ff.
- 36. Raczkowski, op. cit. p 316.
- 37. Goehler/Weitkus, "Sozialistische oekonomische Integration und gegenseitiger Vorteil" [Socialist Economic Integration and Mutual Advantage], in SOZIALISTISCHE AUSSENWIRTSCHAFT, 1972/12.
- Huber, "Planning und Stimulierung der internationalen sozialistischen Spezialisierung und Kooperation" [Planning and Stimulation of International Socialist Specialization and Cooperation], in WIRTSCHAFTWISSEN-SCHAFT 1974/4, p 517.
- 39. Ehlert/Luchterhand, "Die aktivere Nutzung der Valuta-und Finanzbeziehungen in der sozialistischen oekonomischen Integration" [The More Active Utilization of Currency and Financial Relationships in Socialist Economic Integration], in SOZIALISTISCHE AUSSENWIRTSCHAFT, 1971/12.
- 40. Buying power parities are used only in the area of noncommercial transactions (services above all). Peak payment calculations which occur here are figured in TRb1 and can be charged to the TRb1 accounts of business dealings. (Prague agreement, 1963).
- 41. Huber, op. cit. p 517.
- Autorenkollektiv, "Woerterbuch" [Collected authors, Dictionary], op. cit. p 826.
- 43. H. Haase, "Das Außenhandelspreissystem in RGW" [The Foreign Trade Pricing System in the CEMA], in OSTEUROPA-WIRTSCHAFT 1975/3.
- 44. Shamin, et. al., "Theoretische Probleme der Schaffung hocheffectiver Volkswirtschaftsstrukturen und der Angleichung des Entwicklungsniveaus der Mitgliedslaender des RGW" [Theoretical Problems in the Creation of Highly Effective People's Economic Structures and Approximation of the Development Level of the Member Countries of CEMA], in WIRTSCHAFTS-WISSENSCHAFT 1974/4 p 597.
- 45. Cf. Raczkowski, op. cit. p 317
- 46. K. Kuehne, "Die Marxsche Theorie von den Funktionen des Geldes als Weltgeld" [The Marxist Theory of the Functions of Money as World Money], in G. Kohlmey (ed.) "Außenwirtschaft und Wachstum" [Foreign Trade and Growth], Berlin 1968 p 162.
- 47. Cf. Steffens, op. cit. p 180 ff. "Hard" goods are those whose quality does not correspond to their price insofar as they are too cheap in relation to the "soft" goods (goods of poorer quality).

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- 48. Steffens, op. cit. p 184.
- 49. "Dictionary," op. cit. p 97.
- 50. F. Mueller, "Die Aussenwirtschaftstheorie in der Planwirtschaft" [Foreign Trade Theory in the Planned Economy], Berlin 1975.
- 51. Author not stated, "Lokumente RGW" [Documents of CEMA], Berlin 1971 pp 60 ff.

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MANPOWER: LABOR, EDUCATION, DEMOGRAPHY

SETTLEMENT POLICY IMPORTANT FOR URBAN, RURAL GROWTH

Moscow VOPROSY EKONOMIKI in Russian No 12, 1978 pp 55-65

[Article by M. Strongina: "Development and the Regulation of Systems of Settlement"]

[Text] Regulation of the development of the settlement process plays an important part in further improvement of the system of management of the economy under the conditions of a developed socialist society.

The process of urbanization, unfolding under the conditions of the scientific and technical revolution and forming the basis of the whole modern evolution of settlement, is influencing more and more actively the level of development of the city and the countryside, the system of their interrelations, the processes of transformation of the networks of large, average and small cities and the rural settlements surrounding them into interconnected systems of settlement of a different rank. The systems of settlement are one of the chief forms of complex change of the conditions and way of life of the people in a rural locality, of creation of socially equal opportunities of utilization of the advantages of the city and the country, of overcoming on this basis the socioeconomic differences between the city and the countryside. At the present time drawn up on the basis of just large cities have been about 70 systems of settlement, where approximately one-third of the population and almost half of the urban population is living. systems of settlement are being transformed more and more often into qualitatively new formations, synthesizing in themselves the urban and rural types of settlement. Concentrated in many systems of settlement, especially large ones, is a considerable share of the rural population of the oblasts in which they are located.

At the present stage of urbanization the formation of new systems of settlement means the development and qualitative transformation of the city and the countryside--traditionally isolated forms of settlement in the past-into interconnected units in the framework of a unified system of settlement for the country. This does not mean, as certain scientists assume,

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that the village is "absorbed" by the city, joining in the make-up of new forms of settlement. The most important feature of the modern systems of settlement is the gradual transition of isolated rural settlements to a new qualitative condition -- systematic development interconnected with the city. This is a matter of a qualitative change in the structure of new forms of settlement -- the organic joining of urban and rural population centers and territories on the basis of growth in the ties between all elements of the territorial-economic structure of the systems of settlement. Manifested namely in the fact of their formation is the new character of settlement predicted back at the beginning of the century by V.I. Lenin, who noted that socialism will lead to the emergence of a "new settlement of humanity (with the destruction of both rural desertion, separation from the world, unsociableness, and the unnatural gathering of gigantic masses in large cities)."2 The processes of overcoming the autonomous nature of the large city, which were begun at the stage 'of formation of agglomerations on the basis of complication of the system of relations between those spatially expanding their center and the urban territories surrounding it, just as the processes of overcoming the autonomous nature of the village on the basis of establishment of direct and more stable relations between it and the city are the main positive features of the modern stage of urbanization, conditioned by the development of the scientific and technical revolution in industrial and agricultural production. Therefore the main goal of state policy in the field of settlement is stipulated by the main feature of its structural change -- by the unification of the city and the village into a single sociospatial structure. This is determined, in turn, by two basic functions of modern urbanization. First of all, by its interaction with the processes of location of productive forces and by the change in the territorial structure of the national economy as the basis of transformation of the network of autonomous population centers, on the one hand, into qualitatively new forms of settlement and, on the other hand, into interconnected territorialeconomic complexes. Second of all this is determined by the development of urbanization as a function of industrialization of agriculture and of agrarian-industrial integration--the foundations of intensive growth and complication of the production, labor and cultural relations of the village with the city, leading to overcoming the autonomous nature of rural settlement from the standpoint of the social structure of the population, the level, conditions and way of life, the socio-cultural environment and so on.

Thus, urbanization is becoming an important factor in transforming the settlement process in the country. Being created on the basis of it are new forms of settlement-specific functional economic regions, in which are combined the places of work, places of residence and leisure, contacts between the population are being made in the production and social spheres, the production structures of the village and the city are drawing closer, and the social structure of the rural population is changing in accordance with the processes of industrialization of agriculture and agro-industrial integration. All this is determining new tasks and goals of development of a strategy of settlement management.

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The policy in the field of settlement should contribute first of all to the development and distribution of productive forces and to increasing the intensification of public production, to accelerating the processes of overcoming the socioeconomic differences between the city and the country, to bringing closer the level, conditions and way of life of urban and rural residents. There appears in addition the necessity of working out two different strategies of settlement development. This is conditioned by the objective process of dividing the territory of the country into two types: a territory of already formed and developing systems of settlement and an interurban thinly populated space with sparse, grimarily rural settlements. Necessary on the territory of the first type is regulation of the established systems of settlement by means of realization of the progressive tendencies of urbanization, leading to overcoming the autonomy of the city and the village. The approach to development of settlement on territories of the second type is connected with reorganization of the network of disperse urban and rural population centers and pertains in essence to the reorganization of rural settlement.

There should be in common in the development of systems of settlement on the territories of the two types the following points: planned regulation of the processes of joining urban and rural territories, industrial and agricultural production; purposeful regulation of the processes of development and complication of production, cultural and domestic and labor relations, joining population centers that are different in size and functional designation into a unified territorial-economic complex; the organization of a unified infrastructure and especially a transport network on the basis of an integral planning decision; support of the principle of accessibility of the places of application of labor, recreation zones and leading cultural centers for the whole population.

Usually recognized as the basic features of interconnected systems of settlement are, first of all, the formation of a vast zone of intensive development under the influence of two opposite tendencies: dispersal of the industry and population of a large city on contiguous territories and increasing the concentration of functions of management, the production of information, and services in the limits of the central urban nucleus; second of all, a free (instead of compact) lay-out and delineation of specialized functional zones; third of all, spatial joining of industry with intensive agriculture; fourth of all, the formation of a complex system of coordination of urban and rural settlements differing in size and functional purpose, including in the system centers that are smaller by comparison with the main city and possess their own spheres of influence and joint diverse interrelations. The territorial structure of systems of settlement, as a rule, is a unified territory of development, consisting of a central urban nucleus, protective "green belts" and a vast exterior zone -- an aggregate of urban and rural population centers and territories.

Worked out most in detail have been the economic questions connected with reorganization of a large city and involving it in system development. This means first of all the change in the character of the processes of

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concentration of production and population, the progressive structuralsectorial shifts in the national economy leading to negation of the very
form of the compact city, the dying away of it as an independent,
autonomous form of settlement.3 Along with this the opinion is expressed
that "economic research (including in the field of optimum functioning of
the socialist economy) is still inadequately aimed at analysis of the
laws of urbanization and the ways of solving urban problems." Necessary
therefore is further development of the theory and a complex of practical
measures as the prerequisites for creating a "socioeconomic mechanism
capable of supporting the corresponding transformation of the settlement
process." The first attempts at solving this problem were generalized in
the concept of group systems of settlement, in which is stressed the significance of the program-target approach to solution of economic and social
problems of modern settlement.

The processes of formation of the economic basis of group systems of settlement are tied in with the processes of formation of territorialsectorial production associations, for which "becoming more and more characteristic is the organization of production based on the interaction of the head enterprise, located in the central city, and the specialized affiliates, moved beyond its limits." The important significance of formation of associations for development of the functional and territorial structures of settlement systems is obvious even from that as of 1 July 1974 just in the six largest cities which are centers of group systems and in the population centers of the corresponding oblasts -- the Leningrad, Moscow, Gor'kovskaya, Sverdlovskaya, Kiev, and L'vovskaya--24 percent of the plants and factories making up the association were located, and to their share fell 36.1 percent of the personnel of all production associations and 39.3 percent of the output produced by them. The fact that the economic basis of the group system is formed under the influence of progressive tendencies in the structural changes of productive forces, including as a result of changes in the production-economic structure of industry, the main link of which is becoming not an individual enterprise, but a combination of them, evidences the formation of a mechanism of restraint of the growth of large cities and intensive economic development of the territories surrounding them. The correspondence of the spatial structure of settlement systems to modern tendencies of setting up fractional forms of specialization determines the role of settlement systems as a mechanism of realization of economic effectiveness from the concentration of production. We are speaking in the given case not only about the "agglomeration effect," that is the economic benefit from spatial concentration of production and resources in a system of territorially associated urban population centers, but also about the effect which is yielded by a change to those new forms of concentration like production associations and the new forms of specialization -- the branch plants, specialized shops of large plants and factories, and so on. Placement of them in population centers in the zone of influence of large cities is becoming an important prerequisite for increasing the economic effectiveness of complex development of settlement systems. As calculations show, "in cities located in the zone of influence of a very large city with a projected population of 1,000,000-1,300,000 people, it is possible and economically effective in the course of the

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future period to organize up to 25-30 branches of head enterprises with the total number of employees at 40,000-50,000 people and 8-10 industrial service enterprises with the number of employees at 10,000-15,000 people."

In small and average cities, a significant share of which is included in group systems of settlements, set up as associations were a large number of specialized branches and shops. This responds to the tasks of urban development set forth in the "Basic Directions of Development of the USSR National Economy for 1976-1980."

On territories of the first type it is necessary to conduct a policy aimed at the utilization of the socioeconomic advantages from concentration of production and population with simultaneous stimulation of the centrifugal tendencies in their development and distribution. It is expedient for this to implement preferential planned utilization of the space beyond the limits of the 'arge cities—the main centers of the settlement systems. The planning of the settlement systems should be directed at complex development of the whole territory of settlement systems, including the rural area, taking into account the production specifics of their

The urgency of this task is determined by the new role of the rural area in the mechanism of formation of the increasingly complicated systems of settlement. The attempts made to regulate the settlement systems have not yielded perceptible results because the policy in the field of settlement did not consider two chief objective processes in reorganization of their structure: first of all, the tendencies of joining urban and rural territories in them and the transition of the village to a new quality state, the gradual loss by it of a separate socioeconomic position and, second of all, the tendencies of a transition from a compact autonomous city to new forms of concentration of production and population on a vast territory and the formation of a network of interconnected population centers. Therefore the complex program-target approach to regulation of settlement systems should be based on working out a unified system of management of urban and rural territories. For this purpose it is necessary to improve current statistical accounting which up to now has been based on the utilization of the traditional concepts of "city" and "village" as the chief units of urban and rural settlement. It is important also to introduce new forms of in the practice of territorial planning as low-level units, to be used at all of its stages -- during development of regional schemes of settlement, regional planning schemes, master plans of cities and rural schemes of regional planning.

The settlement process on territories of the second type with a network of autonomous and scattered small urban and rural population centers just as settlement on territories of the f rst type is stipulated by the peculiarities of the modern stage of urbanization. In this case urbanization is becoming the basic factor in reorganization of the rural settlement process. The urbanization processes begin gradually to destroy the traditionally established isolation of rural territories on the basis of

intensification of the whole aggregate of relations between the city and the village, the increased complication of the structure of the production sphere of the village and the change in the social structure of the rural population in accordance with the demands of industrialization of agriculture and agroindustrial integration, and there is modernization of the rural way of life and so on.

However urbanization still has not brought to life new territorial forms of organization of the rural settlement process corresponding to the objective process of the transition of the village to a new qualitative state—from autonomous to system development interconnected with the city. Therefore necessary on territories of the second type is the development of other methods of control of the development of the settlement process in comparison with territories of the first type.

The urgency of development of new approaches to reorganization of rural settlement is determined not only by the specifics of modern urbanization, but also by the tasks of industrialization of agriculture, by the necessity of improving its organizational and economic forms. It is becoming more and more important for solution of this task to overcome the autonomy of rural settlements on the basis of expanding the ties between the rural locality and the city—the intersectorial and labor ties—in the field of general and vocational education, culture, management and so on.

One of the chief forms of intensification of the ties between the rural area and the city on the territories of the second type is the creation of settlement systems.

When working out measures for improvement of rural settlement it is important to consider first of all the complication of the make-up of the sphere of the use of labor in the rural area and the growth of the demands of the rural population in the fields of labor, everyday life and culture, which practically can no longer be satisfied in the framework of an individual village, even with the modern level of amenities. The rural resident should receive the opportunity to select the type of activity, occupation and place of work and to live under the conditions of a social environment providing him with real opportunities for realization of the basic feature of the socialist way of life. All this is determined in considerable measure by the laws of urbanization, leading to bringing the city and countryside closer together by overcoming their autonomous development. The process of the increasing loss by the rural locality of the traditionally established isolation from the city makes further consideration of rural settlement as an independent problem incorrect. The modern village is not a closed system, in the framework of which its chief socioeconomic problems are solved. Creation of settlement systems in the rural locality will make it possible more effectively to organize the vital activity of the rural population in comparison with reorganization of the rural settlement process on the basis of enlargement of autonomous villages.

The new socioeconomic position of the countryside is being formed in the process of including settlements and territories as elements with equal rights in the complex and dynamic system of settlement. It is important to consider that the modern established and developing forms of settlement are not an amorphous mixture of urban and rural population centers and territories, but a unified organism with a specific territorial and functional structure, capable of purposeful development.

The arrival of the countryside at a higher level of qualitative development is also a manifestation of urbanization, just as the formation of the systems of settlement transforming the city. Such a dual character of the process of urbanization ensues from the deep meaning of it which, according to A. Vishnevskiy's definition, consists in that "the historical process as a whole engenders at a certain stage new conditions of the direct interaction of people," with the realization of which "processes of real organization of the spatial medium of habitation are also connected." This means that the organization in a rural locality of settlement systems in which the interconnection of the city and the village is realized corresponds to the internal laws of the modern urbanization process.

Possible, thus, is the reorganization of a significant part of the urban and rural settlement existing on territories of the second type on the basis of formation of interconnected systems unifying the urban and rural population centers and territories with comprehensive economic and sociocultural development of the whole territory of the given system. 12

Organization of the systems of settlement with a developed infrastructure (particularly the social and transportation) provides the population of the rural locality and small urban settlements with the opportunity of enjoying those advantages which are accessible to the population of established and developing settlement systems on territories of the first type. This is first of all the real possibility of selecting the places of work and the typesof activity, including without a change in the place of residence, and broader opportunities for learning an occupation, for education, advanced training, real access to information, culture, and broadening of communication. Thereby the complex forms of settlement will contribute to the formation of a new type of worker, possessing professional skills and a broad group of cultural and spiritual needs. Having created socially equal conditions for realization of all the vital activity of the urban and rural population, the systems of settlement will create the conditions for keeping skilled personnel in the rural locality. It is not an autonomous large village, even with a modern level of amenities, taking shape as a result of settling together from surrounding "unpromising" villages, but an interconnected network of urban and rural settlements of different size and functional purpose and in this sense the joining of the urban and the rural territory -- this is the most progressive form of reorganization of the settlement process under the conditions of the unfolding industrialization of agriculture and the development of agroindustrial integration. The purposeful creation of settlement systems

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signifies overcoming the ineffective autonomous siting of rural settlements or the creation of groups of population centers in the framework of individual agricultural enterprises (which, in essence, is equivalent to autonomous development of settlements). Organization of settlement systems is a positive alternative to the attempt to solve problems of sociocultural development of the countryside by means of mechanical consolidation of population centers.

An important condition of realization of the noted advantages of settlement systems is the provision for residents of all their population centers of a convenient and rapid method of communication with the main center (or centers) of the system and with other settlements. The development of settlement systems and the development of a highway and transport network in the rural locality are two interconnected tasks.

The practice of reconstruction of rural settlement generally accepted at the present time is directed at reorganization of the village itself and is reduced to differentiation of rural population centers into promising, subject to consolidation and provision of amenities, and nonpromising, subject to loss of population. Thus, according to the schemes of regional planning out of the 469,300 rural population centers existing in the country at the time of the 1970 census, it was planned to disband about 200,000. In a number of oblasts of the RSFSR 70-80 percent of the settlements were determined to be non-promising. In the Ukrainian SSR it was recommended by planning schemes for rural regions to resettle about 8 million people from more than 20,000 settlements. 13 The general trend of reorganization of the rural settlement process at the present time is a sharp reduction in the number of rural settlements. Such an orientation is taken, for instance, in the "General Scheme of Settlement on the Territory of the USSR," in which although it is proposed to rebuild the rural settlement on the basis of organization of group systems in the rural locality, it is with the inclusion in their make-up of just the network of promising consolidated rural population centers, 14 In addition it is proposed for 220,000 population centers to undergo just accelerated disbanding, and to preserve out of the total number of settlements just 119,000-120,000.15 In evaluating positively on the whole the basic idea of organization of settlement systems in the rural locality as the main direction of reconstruction of the rural settlement process, which equalizes the level, conditions and way of life of urban and rural residents, we note nevertheless that the very way of realization of this idea, in our view, is in need of refinement. The need for consolidation of rural settlements most often is connected with the task of improving their amenities, proceeding from the effectiveness of construction in large villages of facilities for cultural and domestic services for the public and the saving of outlays for development of territories as a result of increasing the density and number of stories of the residential building. In our opinion, such an argument does not answer the main questions on what basis should we include in the group systems, formed as an interconnected network of settlements with a developed transport infrastructure,

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only the large villages well-provided with amenities and for what purpose is it planned to eliminate a large part of the rural population centers. Under the condition of transformation of rural settlement on the basis of organization of settlement systems the creation of a whole complex of cultural and domestic services in each village not only is impossible, but is also not advisable, since realization of such measures means that the village in fact should be enlarged to the size of the cities. At the same time the organization in a rural locality of settlement systems will yield the opportunity in a centralized way and on a higher quality level to solve the problems of cultural and domestic services for rural residents, it will make optional the organization of a whole set of institutions in this sphere in each population center and make it possible to preserve the established network of rural settlements of various sizes and types. In connection with this the consolidation of rural settlements for the purpose of providing them with amenities as a condition of inclusion in the settlement system appears unwarranted. An increase in the density and number of stories of residential buildings in the villages in the majority of cases does not correspond to the interests and needs of rural residents first of all because in essence it deprives them of the opportunity to conduct private subsidiary farming, and it destroys the established tenor of life. Stressed at the July 1978 Plenum of the CPSU Central Committee was the necessity of orienting rural construction "to providing the families, as a rule, with individual well-arranged homes with attached farm plots and outside buildings for domestic livestock, fowl, and private means of transport."16

A well known simplification of the problem is also the substantiation of the necessity of consolidation of rural settlements as a consequence of the processes of concentration and specialization of agricultural production, of consolidation of agricultural enterprises. The structure of rural settlement should consider the basic changes in development of agricultural production and especially the processes of its concentration. However there does not follow from this the necessity of automatically amalgamating the rural settlements, since concentration of production in agriculture does not signify a joining of agricultural lands. The amalgamation of rural settlements increases the time for delivery of workers to the field, to the farm and back.

In this connection it appears inadvisable to have consolidation of rural settlements and accelerated departure from the small villages in the non-chernozem zone of the RSFSR. The small sizes of the plots of agricultural lands in almost all oblasts of the zone (for arable land, from 1.6 to 6.0 hectares, for haying, from 0.9 to 2.4 hectares), the degree of littering with rocks and the forest coverage of their territories (almost one-third of the area), as is soundly noted by V. Lyubovnyy, "compels the preservation of the population centers related to them (to the small plots-M.S.)."17 It is impossible not to agree in this connection with V. Artemenko and I. Ponomarenko, who express doubt about the advisability of the recommendations to plan for the future one settlement per farm,

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especially in the non-chernozem zone with the presence in it of a large number of irreducible small plots (more than 1000 on a farm), a scattered network of rural settlements (about 20 villages on a farm) and a high cost of resettlement (3,000-4,000 rubles per person). According to some calculations, the building and provision of amenities for prospective settlements in the non-chernozem zone will require not less than 50 billion rubles. This means that with the planned level of capital investments the completion of the planned changes in the settlement process will go far beyond the limits of the year 2000.

Reorganization of the countryside on the basis of its consolidation has not stopped the outflow of population from the rural area that is superfluous for certain regions of the country and the process of breaking up the network of rural population centers. In many regions of the country the population is leaving not only the small but also the large rural population centers. Thus, in the Central economic region along with the reduction of the proportion of small population centers (up to 100 residents) by 9.3 percent, the share of large settlements with a population of 500-1,000 people has decreased by 3.7 percent. Also being lowered is the degree of concentration of population in settlements with the number of residents at 100-500 people. 20 This is evidence, in essence, of the uncontrollability of rural settlement in the framework of a policy aimed at sharp reduction in the number of rural settlements, the promising nature of which is determined by their size. This is connected first of all with that consolidation of rural settlements is carried out in fact without taking account of the preferences of the rural residents in selection of the place of residence and work, the social environment and so on and therefore the outflow of population, and especially of skilled personnel, from the countryside still has not been able to be stopped.

The approach to reorganization of the rural settlement process, the main goal of which is to overcome the isolation of rural villages, should be based first of all on refinement of the very concept of a "promising" village. Exposure and study of the factors of the promising nature of rural settlements will make it possible to find an approach to classification of the rural area for the purpose of singling out the territories on which organization of settlement systems is the most effective. In our view, such factors may be: firstly, access to the nearest town, located ina.rural locality, an outlet to a route of at least oblast significance; secondly, the attractiveness of the sourroundings; thirdly, the density of the settlements and the population density; and fourthly the level of employment in the rural economy. In any case-with inclusion of the population center in the system of settlement or placement outside of it-the promising nature of the rural settlement should be determined by a complex of factors. Namely the possibility of inclusion in the settlement system in many ways predetermines the promising nature of the rural settlements. The viability of settlement systems in the rural area should be determined by their potentials without additional capital investments toward expansion of the sphere of application of labor and particularly for development of nonagricultural types of activity. The creation for

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rural residents of conditions in settlement systems close to the urban conditions for learning and choosing an occupation, for medical care and so on signifies a realization of the "social" factors of the effectiveness of production and making up for insufficient attention to the "human" factor of production. A complex approach to development of the urban and rural locality in settlement systems makes it possible on the basis of concentration of investments to determine the most rational sequence of their utilization and to overcome the well known duplication of investments and their scattering.

It should be noted that capital investments in development of settlement systems cannot be regarded as diverting means from the rural locality. On the contrary, investments in development of a city or a chain of relatively small population centers as support centers of the development of a vast rural region, in which nonagricultural types of activity are being developed, the service sphere is concentrated, a social environment is being formed and so on, will directly further the development of the rural locality and contribute to the solution of the chief social problems—preservation of the rural population and equalization of the socioeconomic and cultural differences between the city and the country. The social significance of these problems is so great that it cannot be expressed in monetary terms (for instance, in outlays for providing amenities to rural settlements) since not all elements of the benefit from solution of the social problems of the village can be subjected to such an evaluation.

The progressive processes of formation and complication of the composition of the production sphere of the village owing to growth in nonagricultural types of activity and the change in the social structure of the rural population are the real economic basis of organization of settlement systems on territories of the second type.

Powever at the present time a number of the problems connected with organization of settlement systems in the rural area remains to be worked out. Thus, it has not been established to what degree the existence of a city in a rural locality and its size stimulate economic and social development of the village, or the growth of its intersectorial, labor and other relations with the city. In addition, it is important to establish the possibility of using the established network of small population centers as the organizing nucleus or core of the settlement systems to be set up on rural territories which do not have cities the growth of which it would be expedient to promote.

In this connection we will note that the attempts to uplift the economy of backward, primarily rural regions undertaken in the last decades in the United States were concentrated around the idea of creating so-called "growth centers" as the support centers of development of rural territories, and especially the determination of their size.

In this case the concept of "growth center" was not identical to the concept of "growth point" and was defined "as a complex consisting of one or more

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communities or population centers which, taken together, provide or should if possible provide a number of functions-cultural, social, for providing employment, trade functions and functions in the service sphere for itself and its adjoining rural hinterland."21

As acknowledged by American scholars, the two largest programs with respect to volume of capital investments and coverage of territories—the programs for regional development of Appalachia and the program "for public works and economic development"—had limited success first of all because the resources were distributed not in a concentrated way, but were scattered among very small²² "growth centers."²³ The choice of small villages as "growth centers" proved to be an essential error of the programs of development of backward rural regions in the United States. Obviously determination of the size of the center with which the rural territories are connected in a unified rural—urban structure, more precisely the "threshold" with which is formed the ability of this center to affect the socioeconomic and cultural development of the urban and rural population centers and territories gravitating towards it, is one of the chief problems of organization of settlement systems in the rural locality.

In our opinion, the city (or interconnected group of settlements) in the rural locality as the focal center of development of the surrounding rural region can be the deciding factor in supporting its viability. Such a center inevitably will contribute, firstly, to increasing the complexity of the structure of the production sphere of the rural locality and especially to intensive utilization of territories near the city; secondly, to expansion of the sphere of application of labor for rural residents owing to higher structural-functional development of the suburban zones and intensive pendulum-like movements of rural residents, which are increasingly coming forward as alternatives to rural-urban migration. In this case moving the whole family to the city becomes optional, which contributes to keeping in the rural locality some of the labor resources released from agriculture. In addition, the city in the rural locality is the base for formation of agroindustrial complexes and especially the organization of production facilities for processing agricultural raw material, the output of certain types of equipment for agriculture and so on.

Thus, the approach to settlement management on territories of the second type should be based on consideration of the main feature of urbanization and evolution of the settlement process—overcoming the autonomous nature of the city and the village and the amalgamation of them in a single socio—spatial structure. Such an approach demands especial flexibility with respect to making planning decisions in each case depending on the regional and local conditions.

The reorganization of rural settlement, aimed at keeping skilled cadres in the rural area and equalizing the working and living conditions of urban and rural residents can be implemented only when account is taken of the

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broad group of socioeconomic preferences of the rural population, of its growing demands in the areas of labor, everyday life, culture and leisure.

The objective processes of reorganizing the settlement process and particularly the development of complex interconnected systems of settlement demand a review of traditional urban development approaches to regulation of the city and the village as independent forms of settlement. The state policy in the field of settlement should be organized taking into account, on one hand, the specifics of evolution of the settlement process on the territories of the two types and the special features of the modern urbanization process, involving both the city and the village in system settlement, and, on the other hand, the demands of the population itself regarding settlement. The complex approach to development of urban and rural population centers and territories is the prerequisite for formation of a unified unionwide system of settlement and further improvement of territorial planning.

Footnotes

- See: D.G. Khodzhayev, A.V. Kochetkov, F.M. Listengurt, "Sistema rasseleniya v SSSR" [Settlement System in the USSR], Izdatel'stvo "Ekonomika", 1977, p 26.
- V.I. Lenin, 'P.olnoye sobraniye sochineniy" [Complete Collected Works], vol 26, p 74.
- 3. A.G. Vishnevskiy, "Economic Problems of Development of Forms of Urban Settlement" ("Problemy sovremennoy urbanizatsii" [Problems of Modern Urbanization], Izd. "Statistika", 1972); A. Kochetkov, "Socioeconomic Aspects of Urban Development" (VOPROSY EKONOMIKI, No 10, 1975); O. Pchelintsev, "On the Question of the Socioeconomic Mechanism of Overcoming the Differences Between the City and the Country" ("Vsesoyuznaya nauchnaya konferentsiya: Problemy preodoleniya sotsial'noekonomicheskikh razlichiy mezhdu gorodom i derevney" [All-Union Scientific Conference: Problems of Overcoming the Socioeconomic Differences Between the City and the Village], 4th edition, Moscow, 1975; Yu.L. Pivovarov, "Sovremennaya urbanizatsiya" [Modern Urbanization], Izd. "Statistika", 1976; D.G. Khodzhayev, A.V. Kochetkov, F.M. Listengurt, "Sistema rasseleniya v SSSR" and others.
- 4. O.S. Pchelintsev, "Urbanization, Regional Development and the NTR [scientific and technical worker]" (EKONOMIKA I MATEMATICHESKIYE METODY, Vol 14, No 1, 1978, pp 7-8).
- 5. I.bid., p 8.
- 6. On the basis of this concept at the present time in our country a "General Scheme of Settlement on the Territory of the USSR" has been worked out, in which proposed for the first time in domestic urban

development practice is a complex of measures for improving settlement with the use of group systems as the main trend in reconstruction of the settlement process for the future (see, for instance, G. Fomin, "Soviet Urban Development At a New Stage" (KOMMUNIST, No 11, 1974); A.V. Kochetkov, F.M. Listengurt, "General Scheme of Settlement on the Territory of the USSR: Goals, Problems, Solutions" (IZVESTIYA AN SSSR. SERIYA GEOGRAFICHESKAYA, No 5, 1976, and others).

- See: D.G. Khodzhayev, A.V. Kochetkov, F.M. Listengurt, "Sistema rasseleniya v SSSR", p 55.
- Yu.V. Subotskiy, "Razvitiye ob"yedineniy v promyshlennosti"
 [Development of Associations in Industry], Izdatel'stvo "Nauka",
 1977, p 88.
- G.S. Ronkin, "Problems of Formation of the Economic Basis of Group Systems of Population Centers" (in the collection "Problemy ekonomiki gradostroitel'stva" [Problems of the Economics of Urban Development], Kiev, "Budivel'nik", 1974, p 45).
- 10. See: "Printsipy formirovaniya gruppovykh sistem naselennykh mest" [Principles of Formation of Group Systems of Population Centers], Stroyizdat, 1978, p 14.
- 11. VOPROSY FILOSOFII, No 4, 1978, p 174.
- 12. Inclusion of a rural locality in a settlement system does not exclude preservation of autonomous rural settlement, in particular, in the south of Siberia and the Far East, in certain regions of Central Asia, Kazakhstan, the Carpathians and others.
- 13. See: V. Artemenko, I. Ponomarenko, "Settlement and Complex Regional Planning," (EKONOMIKA SEL'SKOGO KHOZYAYSTVA, No 6, 1976, p 83).
- 14. See: "Regional Settlement and Regional Planning," "TsNIIP gradostroitel'stva. Sbornik nauchnykh trudov" [Central Scientific Research and Planning Institute for Urban Development. Collection of Scientific Works], 1976, p 30.
- 15. See: Ibid., p 41.
- 16. PRAVDA, 4 July 1978, p 3.
- 17. "Proizvoditel'nyye sily Nechernozemnoy zony RSFSR" [Productive Forces of the Nonchernozem Zone of the RSFSR], Izdatel'stvo "Mysl'", 1977, pp 22, 23, 241.

- 18. V. Artemenko, I. Ponomarenko, "Settlement and Complex Regional lanning," (EKONOMIKA SEL'SKOGO KHOZYAYSTVA, No 6, 1976, p 84).
- 19. V. Stern, "Ways of Development of Rural Settlements of the Nonchernozem Zone of the RSFSR" (VOPROSY EKONOMIKI, No 10, 1974, p 52).
- 20. See: Ibid., p 85.
- 21. B.J. Berry, "Growth Centers in the American Urban System," Vol 1, Camb. Mass., 1973, p 48.
- 22. Thus, in the program for "public works and economic development" more than one-third of the subsidies was directed to population centers with a population of less than 2,500 people and over half to those with a population of less than 5,000 (Regional Development and Planning: International Perspectives. Edited by A.R. Kuklinski, Leyden, 1975, pp 146-147).
- N.M. Hansen, "Improving Access to Economic Opportunity: Nonmetropolitan Labor Markets in an Urban Society," Camb. Mass., 1976, pp 163-164.

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FRACTIONAL ECONOMIC ZONING OF THE EASTERN BAM ZONE

Moscow IZVESTIYA AKADEMII NAUK SSSR, SERIYA GEOGRAFICHESKAYA in Russian No 6, Nov-Dec 1978 pp 65-79

[Article by P. Ya. Baklanov, V. N. Sevost'yanov and I. R. Spektor of the USSR Academy of Sciences' Far Eastern Science Center's Pacific Ocean Institute of Geography: "Fractional Economic Zoning of the Eastern Baykal-Amur Mainline Impact Zone (Concept and Methods)"]

[Text] Proceeding from the principles of and experience in economic-geographic zoning accumulated by Soviet scientists, the authors outline a broad concept of zoning which considers the impact of the TransSib [TransSiberian Railroad] and BAM [Baykal-Amur Mainline], of the present and long-range production-functional structure of the largest population centers and the availability of natural, labor and other resources in the territory being examined.

BAM Impact on East Siberian and Far Eastern Economic Zoning. Economic zoning occupies an important place in economic forecasting and long-range national economic development planning. By reflecting the objectively existing geographic differentiation of the economy which has evolved and of natural resources and conditions, as well as their actual and potential economic interrelationships within territories differing in scale and character, economic zoning creates the basis for shaping concepts of national economic development for such territories and lays down the requisites for the territorial planning and management of regional development. Economic zoning plays a special role for territories of intensive economic utilization.

The USSR Gosplan began zoning Eastern Siberia and the Far East back in the 1920's. Even then, the economic region was understood to be a link in the nation's complex national economic system, and zoning had to provide opportunities for building "regional economic development plans based on the best use of all potential at minimal expenditures" ("Voprosy ekonomicheskogo rayonirovaniya SSSR" [Questions of USSR Economic Zoning], 1957, p 103). The basic zoning link was and remains the large economic regions of Eastern Siberia and the Far East, and many works have been devoted to substantiating

that zoning (Pomus, 1960; Kolosovskiy, 1970; Krotov, 1973; "Ekonomicheskaya geografiya SSSR" [Economic Geography of the USSR], 1973; Belousov, 1976; Kistanov, 1976, and others).

The accelerated development of productive forces in the eastern regions and the increasing complexity of their territorial-economic structure have required more fractional zoning. The administrative-economic regions -- oblasts and krays -- which have evolved have come to play an ever-increasing role in regional development (Nedeshev, 1975, and others); these regions are in turn divided into intraoblast regions, or as they are frequently called in the economic-geographic literature, simply "fractional regions" (Table 1). A more or less stable three-level economic zoning system has now evolved for Siberia and the Far East. The TransSiberian Mainline (Trans ib) is the basic economic pivot linking the major economic regions, oblast economic regions, and the bulk of the fractional economic regions (including nearly all the most-developed ones) in this system.

Table 1. Southern Far East Fractional Economic Zoning Variants

| (1) | (2) Дроскі | не экономические ра | Йоны, выделяеные р | аэличнычи автор | amn |
|---|--|--|--|---|---|
| Единицы адчини- стратин- ного деле- ния | Головкия Л. А., Двяконов Ф. В., Анергон Э. Г., Шапило Е. С. (3) (1962) | Віульман Н. К., Стенанов Л. Л., Российскай феде- рации, «Дальний Носток» (серпи Советсний Союз) (4) (1971) | Гладышев А. Н., Куликов А. В., Шапалін В. Ф. (5)(1974) | Работы отдела 6 жоночния ДВНІІ АН СССР°, Ленгипрогора, Гидрознерго- проекта (1974) | (7) Кибаль- чич О. А. (1975) |
| (8) Амурская область | 1. Привировния 2. Гориотаежица 3. Зекско-Буреви- ский | 1. Амую Зейский 2. Горный Север 3. Зейско-Вурсии- ский | Примусский лесопромышлен- месопромышлен- мый северо-Запад- кый гориотаеж- ный Соободнек:кнй Зейско-Бурени- ский промыш- ленко-вграрный | 1. ЗМЕНО- амурский 2. Североамур- ский 3. Зей-ко-Сво- бодненский 4. Южновмур- ский 5. Бурениско- Рабункин- ский | 1. Зант до- амурский 2. Селенджин- ско-Ургаль- ский |
| (9)Xadepos- cură ripaă (oxivian Pacts) | Еврейская авто- моная область Ургалыский Хабаровский Хабаровское Приуссурье Консомольский | 1. Еврейская авто- помая область 2. Центральные районы 3. Саверное При- анурые 4. Хабарожкое Приуссурые | 1. Беробиджан- ский промыш- ленно-аграрный 2. Хабаровский промышленный 3. Ком омольско- Амурский про- мышленный 4. Приуссурайский промышлений 6. Сожгаванский промышлению- транспортный уэва: | | 1, Нижне- амурский |

Key:

- 1. Administrative units
- 2. Fractional economic regions delineated by various authors
- 3. D. A. Golovkin, F. V. D'yakonom, E. G. Meyerson, Ye. S. Shapilo (1962)
- 4. N. K. Shul'man, A. A. Stepanov "Rosiyskaya federatsiya, 'Dal'niy Vostok' (seriya Sovatskiy Soyuz)" [Russian Federation, "Far East" (Soviet Union Series)], 1971
 5. A. H. Gladyshev, A. V. Kulikov, B. F. Shapalin (1974)
- 6. Works of the Economics Department of the USSR Academy of Sciences' [continued on page following]

[Key to Table 1, continued from preceding page]

Far Eastern Science Center,* the Leningrad Branch of the State City Planning Institute, and the Gidroenergoproyekt 1974

- 7. 0. A. Kimbal chich (1975)
- 8. Amurskaya Oblast
 - (A) 1. Amur area (Priamurskiy)
 - 2. Mountain-taiga (Gornotayezhnyy)
 - 3. Zeysko-Bureinskiy
 - (B) 1. Amuro-Zeyskiy
 - Mounainous North (Gornyy Sever)
 Zeysko-Bureinskiy
 - (C) 1. Amur lumbering area
 - 2. Northwest mountain-taiga
 - 3. Svobodnenskiy
 - 4. Zeysko-Bureinskiy agroindustrial (D) 1. Western Amur (Zapadnoamurskiy)
 - 2. Northern Amur (Severoamurskiy)
 - 3. Zeysko-Svobodnenskiy
 - 4. Southern Amur (Yuzhnoamurskiy)
 - 5. Bureinsko-Raychikhinskiy
 (E) 1. Western Amur (Zapadnoamurskiy)
 - 2. Selemdzhinsko-Urgal'skiy
- 9. Khabarovskiy Kray (southern portion)
 - (A) 1. Yevreyskaya Autonomous Oblast
 - 2. Urgal'skiv
 - 3. Khabarovskiy
 - 4. Khabarovsk-Ussuri area (Khabarovskoye Priussur'ye)
 - 5. Komsomol'skiy
 - (B) 1. Yevreyskaya Autonomous Oblast
 - 2. Central regions
 - 3. Northern Amur area (Severnoye Priamur'ye)
 - 4. Khabarovsk-Ussuri area (C) 1. Birebidzhanskiy agroindustrial
 - 2. Khabarovsk industrial
 - 3. Komsomol'sk-Amur industrial
 - 4. Ussuri area industrial (Priussuriyskiy industrial)
 - 5. Nizhneamurskiy
 - 6. Sovetskaya Gavan' industrial-transport center
 - (E) 1. Nizhneamurskiy
- (*) Works of the former Laboratory of Amurskaya Oblast Industrial Development and Distribution of Industry (V. G. Chursin, et al.)

The expanding construction of the Baykal-Amur Mainline which, as A. N. Kosygin said at the 25th Party Congress, "is called upon to become a powerful layer for the economic development of our far-eastern regions" and the economic utilization, now begun, of an enormous territory, the economic gravitational zone, have led to the necessity of re-examining somewhat the views

which have evolved on the economic zoning of many eastern regions. This mainline is the powerful new economic pivot of the USSR East and will connect the practically unutilized territories adjacent to it, which possess very rich natural resources, and focus their economic interaction. This is already necessitating that we reveal the problems and directions of economic development of the BAM economic impact zone and define its place in the system of economic zoning for Eastern Siberia and the Far East.

New centers and ranges of economic development, some of which will create new regions at the intraoblast level, will arise as the mainline is put into operation.

The existence of a specific zone of route economic impact is obvious to all BAM researchers, but there are divergent ideas about the scope, character and forms of its utilization, due to different understandings of the status of this zone relative to the circumjacent economic givens. The various points of view are largely represented, for example, in the works of V. B. Sochava (1975) and O. A. Kibal'chin (1975). V. B. Sochava delineates the long-range economic-geographic sphere of influence of the BAM, including in it both individual territorial industrial and agroindustrial systems of the southern part of Eastern Siberia and the Far East. Similar views are held by a number of geographers and economists (Tarasov, 1974; Shnitser, 1976), who view the mainline being built here as a region-generating axis of high taxonomic rank. F. V. D'yakonov (1977) and N. N. Kazanskiy (1977) also view the BAM as a most important level for comprehensive development of productive forces of the eastern regions of the USSR.

O. A. Kibal'chich (1975) does not single out an independent BAM zone, but views it as an area in which a number of eastern USSR regions performing different functions in the union-wide division of labor and making different demands on that territory interact. This point of view has been supported increasingly by subsequent research (Nedeshev, 1976; Lazhentsev, 1976; Simonov et al., 1976, and others). It is noted in these works that BAM construction and subsequent economic utilization of the zone are a single regional-complex problem, but one which will be solved differentially for each administrative-economic region with consideration of its potential and structure.

At the same time, delineation of a specific belt adjacent to the route as a zone of immediate economic gravitation to whose economic utilization the BAM will extend its special influence is justified (Sochava, 1975; Sochava et al., 1975, and others). There is a certain unity in this narrower interpretation of the BAM zone as a springboard belt for utilizing the natural resources of the adjacent territories, for concentrating extractive production and shipping out its output to other regions of the country and for export.

A majority of the authors think utilization of the zone's natural resources will be most efficient if chains of 8-9 territorial-production complexes are

created (Kibal'chich, 1975; Ayzenberg, 1976; Maslennikov et al., 1976, and others). However, adequate substantiation has not yet been found for the specifics and stages of the formation and development of territorial-production complexes of different taxonomic ranks, for their structure and interrelationships with existing elements of the economy.

The BAM Zone in the Economic Zoning System. The infrastructure in general and its transport links in particular exert a great influence on forming the territorial structure of the productive forces of the Far East, which will continue to be a region of resources orientation for the immediate future. The region's leading route, the TransSib, was and remains the primary lever for utilizing the southern and central territories of the Far East. This transport mainline is the common link to a majority of the most important territorial-production structures of the southern zone and determines the general outlines of their linear-junction nature. It has shaped a broad area of economic influence in the northern and southeastern sections. The railroad being built and the territory now being designated the BAM zone are obviously essentially still in the sphere of influence of the TransSib. The TransSiberian mainline and the economic and scientific potential developed along it serve as the support base for construction of the new railroad. On the other hand, construction of the BAM and utilization of the zone's natural resources will greatly "deform" the territorial structures which have evolved in the economy of the southern zone of the Far East. This "deformation" will occur, first, due to the formation here of new production links and their interdependence to one extent or another with existing links and, second, due to the restructuring and reorientation of a number of existing production facilities in response to new demands and opportunities.

One specific of the BAM as a new region-generating axis is the fact that this route is being laid nearly parallel and relatively close to the Transsib (150-300 km apart in the eastern portion). The BAM as a whole will begin to play a powerful region-generating role similar to that of the Transsib in the future and will begin shaping its own sphere of economic influence. As a result, there will be substantial superimposition and intersection of both zones of economic influence and a broad zone of inter-route interaction will be formed. Thus, the zone of BAM influence must not be viewed either as an existing nor as a prospective independent economic region. Forecasting research must proceed from the concept of shaping and developing an integral territorial structure for the Far East economy within the eastern portions of the Trans ib and BAM.

Tasks corresponding to the economic development goals of both the country as a whole and individual large economic regions, oblasts (krays) and intraoblast regions will be resolved during the course of construction of the
Baykal-Amur Railroad and subsequent utilization of its zone. Concretization of these tasks and the sequence in which they are to be solved flow
from specific combinations of limited resources -- financial, labor, fuelpower, raw materials -- on the one hand and the different national economic
requirements within eastern territories of various ranks on the other at
specific stages. All this predetermines a multiple-goal hierarchical

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approach to economic zoning. In order to refine the utilization goals and forms, the functional completeness of management and degree of interdeterminacy of the elements of the production itself within the framework of specific territories, with consideration of the administrative-aconomic zoning hierarchy, must be correlated in each specific instance (see diagram).

Hierarchical Administrative-Economic Zoning Diagram



Key:

- 1. Territorial-administrative hierarchy
- 2. Territorial-economic hierarchy
- 3. Union republic
- 4. Oblast, kray, ASSR
- 5. Lower administrative region
- 6. Large economic region
- 7. Oblast-level economic subregion
- 8. Fractional economic region
- 9. Direction of goals coordination
- 10. Direction of resources-balance coordination
- 11. Target-program levels

The basic approach to economic zoning is a certain relative independence of the management structure from the forms of territorial-economic coherence, as well as the fact that the management functions can be more easily coordinated and balanced (which is in essence always necessary) as compared with production integration. It is therefore always possible in principle for the administrative-territorial and territorial-economic entities to not correspond completely, given the condition that incompleteness of the one is compensated for in certain measure by a more complete structure of the other.

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Based on a target-programs approach to the problem of utilizing the BAM zone (A. G. Aganbegyan, V. P. Mozhin, Ye. B. Ayzenberg, et al., 1975, 1977; Aryanin et al., 1976; Vasilenko, 1977, and others), it has been submitted that there must be a definite correspondence between the system of multilevel national economic zone-utilization goals and the system of economic regions, it being necessary to develop corresponding development programs for each such region and it obviously being desireable to create interdepartmental territorial management-coordination organs to implement these programs. Much attention has recently been paid to the necessity of creating such management organs (Popov, 1977; D'yakonov, 1977, and others). Given the economic zoning of the country's eastern territory with consideration of the long-term prospects for BAM zone utilization, the components of this zone must be viewed at several territorial levels simultaneously. At the USSR level (including the RSFSR), the BAM zone must be developed in accordance with statewide goals, with consideration of the centralized distribution of limited resources (capital investments, labor and material-technical resources) and of establishing the rates of mainline construction, the sequence in the which the most important natural resources are to be utilized, sociodemographic and export policies, and others.

For Eastern Siberia and the Far East as a whole, the primary task is to switch in the productive forces of the zone in stages to the national economic complexes which have already been developed in these regions. In this particular instance, consideration must be given to the basic regional natural and socioeconomic differences, and the long-range BAM economy must be interfaced with the specialization and structure of the economy of these large economic regions which have already evolved. Based on this, the BAM zone is divided into two sectors, a western sector (within Eastern Siberia) and an eastern sector (within the Far Eastern economic region). One specific of the western BAM sector is its status as a relatively developed region with steady specialization and a diverse infrastructure. High energy availability and the presence of a powerful construction base are characteristic of this region as a whole. Its relative proximity to the country's western regions and its range of natural resources will facilitate preferential orientation of the western BAM sector economy towards intraunion requirements, as well as towards mastering the northern regions of Eastern Siberia and Yakutiya.

Specifics of the eastern BAM sector, which includes Amurskaya Oblast, Khabarovskiy Kray and the adjacent lower administrative regions of Yakutskaya ASSR, are:

- a) lower energy availability as compared with Eastern Siberia and a less-developed infrastructure (construction, production-transport and social);
- b) necessity of more intensive initial processing of individual natural resources on the spot, due to extreme remoteness from consumers;
 - c) critical shortage of labor resources, especially highly-skilled ones;
 - d) more favorable natural conditions (improving as one moves east);
 - e) relatively better developed local food base;
- f) significant orientation of the entire Far Eastern economy towards export-import ties, foremost with countries of the Pacific Ocean basin.

The above-noted features of the western and eastern portions of the BAM zone are even more differentiated within the boundaries of the autonomous republics, oblasts and krays. Problems of closely coordinating economic structures, especially along the lines of service, auxiliary and local production, food supply, developing the construction base, and so on, are solved at this level. The development of actual and long-range resource balances (natural, labor, materials) is also necessary at the level of such administrative-economic regions.

Continued differentiation of the goals and tasks of utilizing specific territories and the formation of territorial-production complexes requires the delineation of regions of intraoblast rank and the inclusion in them of appropriate sectors of the BAM and TransSib zone.

Concept and Methods of Fractional Economic Zoning. The experience accumulated in economic utilization of the eastern and northern regions of our country and its generalization permit the assertion that the basic principle of the initial stages of the economic utilization of the BAM zone is the comprehensive use for this purpose of the socioeconomic potential of the southern regions and the formation on that basis of two-link, mutually-supplementing (compensatory) territorial-economic structures. The pivotal elements of such structures will be the meridian transport routes connecting the BAM and TransSib. The most developed industrial-transport centers: Skovorodino, Svobodnyy, Tynda, Zeysk, Urgal and others, must be developed at the intersection of these "ligaments" between the latitudinal trunk lines.

There can be various forms of effective economic interaction in such territorial structures. Thus, stable north-south ties have already been developed along service lines. Construction materials and structures for construction in the BAM zone are being produced in the TransSib zone (including beyond the far-eastern sector of the line); road-building equipment is being serviced there, the food base for the BAM zone population is being developed there, and so forth. Taking into account the strict demand for the economical use of live labor in utilizing the BAM zone, as well as the relatively more harsh natural conditions of the northern regions, which make construction and production more expensive, it will be appropriate in the future to shift the bulk of the economy's supplemental and service production needs into the Transsib zone. Technical-economic calculations (as, for example, those done by Konoplev, 1966, and others) have demonstrated a significant increase in estimated construction costs in the northern regions of the Far East as compared with regions adjacent to the TransSib. North-south ties along shipment lines for resources and concentrates obtained in the BAM zone will be intensified as the natural resources in the BAM zone are utilized. It will also be expedient to process them further in the better-developed southern regions as well.

Thus, in the initial stages of BAM zone utilization it will be more effective to create territorial-production complexes whose resources links and truncated production infrastructure will be supplemented to one extent or another in the BAM zone by processing links and infrastructure in the Trans-Sib zone (Baklanov. 1976).

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It is evident in this connection that detailed concretization of utilization programs down to the level of fractional economic regions, each of which will consist of two links (southern, Trans ib vicinity; northern, BAM vicinity), will be necessary to successfully achieve the differentiated regional goals of BAM zone utilization.

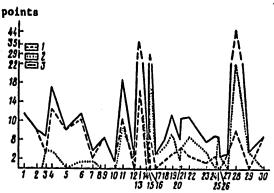
Based on this spatial concept, we¹ did fractional economic zoning for Amurskaya Oblast and the southern portion of Khabarovskiy Kray, with consideration of the zoning principles outlined in works by N. N. Kolosovskiy (1970) and developed and tested by Soviet scientists (for more detail, see I. R. Spektor, 1975). Under the zoning concept being presented here, the nuclei of the fractional regions must be formed foremost along the TransSib route.

Special attention has therefore been paid to singling out such nuclei and territories gravitating towards them as the regions' southern links. A total of 30 industrial centers were examined. Their present and long-range production-functional structure and basic production ties, including ties in the BAM zone, were studied. The enterprises of each center were grouped into three units: basic production, concomitant production and service (a total of 23 types of production were examined). The indicators of gross output volume, value of fixed production assets and number of persons employed were used to describe the level of development of units in the individual centers. The results of the evaluations thus obtained, translated into a point scale, show the combinations of production facilities in each center and their distribution patterns across the entire set of centers in the eastern TransSib sector (figures 1-3, page following).

Similar characteristics were also compiled for existing and prospective settlements in the eastern BAM sector and for the interroute BAM-TransSib zone. The compilation of territorially-fixed economic profiles permitted preliminary disclosure of the current and prospective territorial-production combinations in the southern and northern regions and evaluation of the degree and variants of their mutual augmentation. As is evident from the graphs (figures 2, 4), the following region-generating nuclei are delineated on the TransSib: 1) Skovorodino - B. Never; 2) Magdagachi - Sivaki (less pronounced); 3) Shimanovsk - Svobodnyy; 4) Belogorsk; 5) Teplozersk - Birobidzhan; 6) Khabarovsk; 7) Komsomol'sk. Blagoveshchensk, situated on a Transsib branch line, also plays a region-generating role. The justification for delineating the given TransSib centers as region-generating nuclei is supported by indices of industrial branch localization and urban settlement specialization coefficients for Amurskaya Oblast and Khabarovskiy Kray (Table 2).

Associates V. S. Burilova, A. A. Kravchenko, E. P. Stepanova and T. A. Khlustova of the Laboratory of Geography of the National Economy, Pacific Ocean Institute of Geography of the USSR Academy of Sciences' Far Eastern Science Center, participated in processing the materials.

Figure 1. Functional-Economic Profile by TransSib Sector



industrial centers along the TransSib

Kay:

- 1. Total balance for the basic unit
- 2. Total points for the unit being served
- 3. Overall total points

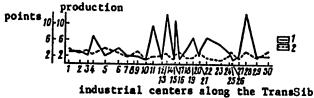
Figure 2. Average Level of Production Development at the Centers



Key:

- 1. Average development points of individual production types
- 2. Number of homogeneous production types in a combination of industrial centers

Figure 3. Average Level of Production Development on the TransSib Sector



Key:

- Number of production types at individual centers
- Average development points of production types at individual centers.

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Industry Branch Localization Indices in Cities of Amurskaya Oblast and Khabarovskiy Kray and Coefficients of their Specialization* (1975 data) Table 2.

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(S1 : S)/100, adding either positive or negative differences. industry, S is the number of people employed industry is the number of people employed in the 1-th branch in the oblast, N Specialization coefficients were Localization coefficients are calculated using Izard's formula (1966): the number of people employed in all industry in the oblast. Iculated using formula $\mathbb{E}(N_1:N)-(S_1:S)/100$, adding either ber of people employed in the i-th branch of of the industrial center, is the number of people e calculated using formula €

Particular attention has been paid to evaluating natural resources, foremost minerals and raw materials, first as a factor of long-term action and second as a factor of objective differentiation of mining industry.

Analysis of the distribution of mineral and raw materials resources deposits for four equidistant belts, the two (northern and southern) belts adjacent to the BAM, the middle belt and the northern belt adjacent to the TransSib, and for eight sectors (with consideration of delineating additional belt sectors within Amurskaya Oblast and Khabarovskiy Kray), permits the following conclusions.

The bulk of the zone's most important mineral and raw-materials resources are in the regions adjoining the BAM. On the whole, about three-fourths of the deposits of metals and nonmetals and more than half the fuel deposits are concentrated here. A third of the fuel deposits and nearly two-thirds of the construction raw material is in the belt adjacent to the TransSib. The mineral and raw-materials bases of Amurskaya Oblast and Khabarovskiy Kray differ substantially in terms of share of the deposits, nature of the spatial distribution of the resources, and structure of their resources potentials.

In Amurskaya Oblast, we have singled out a TransSib belt in which about half the oblast's mineral deposits are concentrated, while the BAM belts have one-third. The profile of the "northern" Amur link is nonmetallic and metallic minerals. The picture is different in Khabarovskiy Kray. About three-fourths of the kray's deposits are concentrated within the belt adjacent to the BAM. The profile of the "northern" link is metallic, nonmetallic and fuel minerals, and the profile of the "southern" belt is fuels and construction raw materials.

The second very important type of natural resources, wood, is distributed more homogeneously over this territory, which predetermines the possibility that branches of various lines of the lumber-industry complex might appear in the structure of all the zone's fractional economic regions.

Agro-ecological resources, which deteriorate systematically from south to north in response to changing natural and economic conditions of the Far East, play an important role within this territory. Agriculture will therefore remain basically coincident with the Amur area and south of the Zeysko-Bureinskiy interfluve (Shtarberg, 1975).

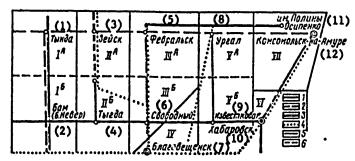
The spatial distribution of mineral and raw-material resources, in conjunction with other economic and natural factors, creates objective requisites for the formation of two-link compensatory regions -- the "southern" and "northern" ranges of concentration of resources being utilized and potential resources, differences in their type-structure, their degree of interchangeability and technological associativity, and so on, are traced precisely.

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The territorial frameworks of the fractional economic regions are additionally refined when zoning inter-route areas based on transport accessibility, resulting in the delineation of five sectors which gravitate towards corresponding transport-route combinations. In this regard, nearly all the sectors have a pronounced meridional elongation along routes connecting the BAM and TransSib. Each sector has diverse combinations of natural resources.

Synthesis of all these data, with consideration of the developing production ties of the industrial centers on the TransSib with the BAM zone, has enabled us to construct a generalized block diagram of the fractional economic regions (Figure 4). As is evident from this diagram, all the territories possess sufficiently well-developed (in view of the BAM) and quite similar transport network structures which will permit intensive economic interaction between the northern and southern links.

Figure 4. Block Diagram of Fractional Economic Regions of the Southern Far



Key:

- 1. Tynda
- 2. BAM (B. Never)
- 3. Zeysk
- 4. Tygda
- 5. Fevral'sk
- 6. Svobodnyy
- 7. Blagoveshchensk
- 8. Urgal
- 9. Izvestkovaya
- 10. Khabarovsk
- 11. imeni Paliny Osipenko
- 12. Komsomol'sk-on-Amur

[legend to block key, lower right]

- 1. existing railroads
- 2. railroads under construction (BAM)
- 3. roads
- 4. waterways
- 5. region boundaries
- hypothetical boundaries of northern and southern regions (see Table 3 for the names of the fractional regions, designated here by Roman numerals)

The final boundaries of the fractional economic regions and their northern and southern links have been adjusted to conform to the lower administrative-territorial division. The results of this zoning are presented in Table 3 and on the map (Figure 5).

| Tal | Table 3. Fract | fonal Economic | c Regions of the | he Southern Far Eas | Fractional Economic Regions of the Southern Far East (eastern zone of BAM influence) | AM influence) |
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| | | • | заготовки | | обрабатылання, добинаю- щая промышленность, строй- нидустрия | cripoente ii penairi, netenii muicala mpalauriciineli, cripointayethia, cenaixe so- |
| = | Верхиезей- ский | Экркмскопро- | Энергетика, до- бевлюция промыш- ленность | Энергения, до- бактаюция промын- леннесть | Электроэнергения, лесь- заготови, дерсиожбраблиза- ющя, истял провышлен- пость, манинестьсяние | ликим Транкропът объзужел- път, десембления, капите- страние, странкраная инду- |
| 3 | Эспджинский | Индустримию- транспортний | Добивношяя промышленность | Акшиностросние и металлообработка, транс- портное обслуживание, пи- исте правиланиениеть, строительных нивуетния | Акшинострисние и ме. Добавления премылен- талвообработы, транс. пость (утоль, исуудное сырке, портное обслуживание, пр. желения руда, цистине ме- писта правидилениеть; тальы), лесталоговыя | |
| 2 | Зейско-Буре- текий | Промышленю- аграриня | Лесодаготовки | Сельскомомистренныя (ваза, топливно-вирреты- исекдя база, кампиострос- ине, легия и инценая промышленность, строн- | Элсктроэнсретния, лесо- элготови, добача угля | Сэхрипсикс совруженного префиле (итенсификалия производства) |
| > | Биробил. жано-Ургаль- ский | Нимустриально- эгрэрный | Добывающая промишленность (Эолого, уголь), яс- | Машинстросние, лет- кая и пицума промын- ленность, сельское хозяй- ство, стрыйнаустрая, де- ревообработка | Машинсстрение, лет- кая и пицела премыш- менность, селекое хозяй- ство, стрейнизустрии, де- вестрейнизустрии, | Сельское хозяйство, стро- ительная биз, пищемая про- машленность, обрабата дре- всения, манивостроение |
| 5 | Хленов- | Йидустривальный | Лесоэлотовки | Миливостроение в ме- таллообработка, иефтетс- реработка; ассоватовоми, деревообработка, в том чисте киническая; астугя в пищевая провизилен- поста, стройнимустрия, трансториное обслуживания | Hecosaronosid | Тямелая индустрия, стрли- тельная база (интенсификация производства) |
| ï, | Комстаоль- | Нимустриально- транспортный | Добавающия промышения промышения (эмьто, олоно), ас- | Машимстросиис и де- соразработка, чергая ис- талаургая, исфинарера- ботка, исминально бумаж- ная, транспортное обслу- живание | Добывающая преиминен- 11, мескияствоюм, дерево- 160тма, вистия металаур- | Тяжелая пидустрия, строительня был (писиси- фикалия притандати) |

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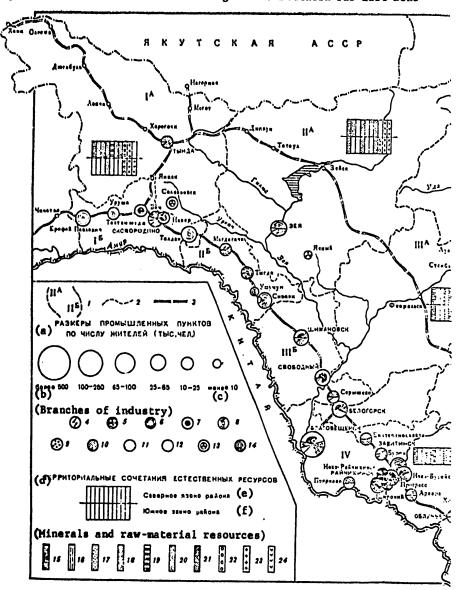
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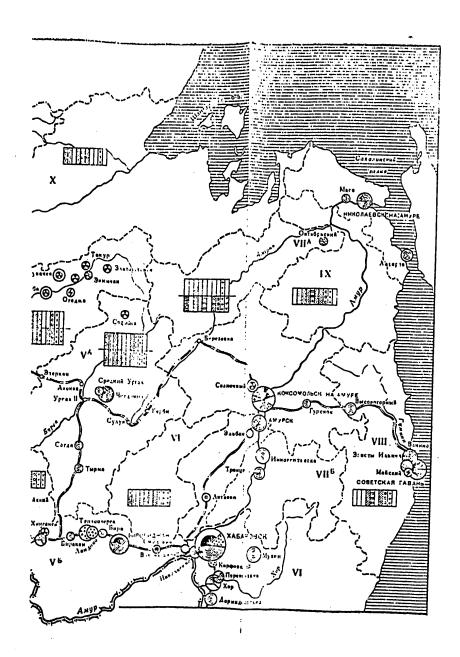
- V-1. Birobidzhano-Urgal'skiy
 - 2. Industrial-agrarian
 - 3. Extractive industry (gold, coal), logging
 - 4. Machine building, light and food industry, agriculture, construction industry, wood processing
 - Extractive industry (gold, tin, coal), logging and wood processing, transport services
 - Agriculture, construction base, food industry, wood processing, machine building
- VI-1. Khabarovskiv*
 - 2. Industrial
 - 3. Logging
 - Machine building and metalworking, oil refining; logging, wood processing, including chemical processing; light and food industry, construction industry, transport services
 - 5. Logging
 - 6. Heavy industry, construction base (production intensification)
- VII-1. Komsomol'sko-Amurskiy
 - 2. Industrial-transport
 - 3. Extractive industry (gold, tin), logging
 - Machine building and logging, ferrous metallurgy, oil refining, pulp and paper, transport services
 - 5. Extractive industry, logging, wood processing, nonferrous metallurgy
 - 6. Heavy industry, construction base (production intensification)
- VIII-1. Sovetskogavanskiy*
 - 2. Industrial-transport
 - 3. Logging, extractive industry
 - 4. Port facilities and transport, ship repair, fishing, wood processing
 - 5. Logging, extractive industry
 - Transport, ship repair, thorough wood processing, fish processing, construction industry; extractive and chemical industry
 - IX-1. Nishneamurskiy*
 - 2. Lumber industry
 - 3. Logging, extractive industry, fishing
 - Port facilities and transport, ship repair, fishing and fish processing
 - 5. Logging, extractive industry, fishing
 - Transport, ship repair, fish processing, wood processing, extractive industry
 - X-1. Udskiy*
 - 2. Region being developed by the Pioneers
 - 3. and 4. Fishing and trapping
 - 5. and 6. Extractive industry (phosphorites, iron ore, alumina-bearing raw material), fishing, logging and wood processing

(*) The two-link structure is specific and less pronounced in these regions.

Thus, "coastal" and "inland" portions of the territory are currently links in regions VIII and IX and will be links in region X.

Figure 5. Fractional Economic Zoning of the Southern Far East Zone





[Key to Figure 5 on page following]

Key:

- 1. Fractional economic region boundaries
- 2. Region link boundaries
- 3. Existing railroads and railroads under construction (BAM)
- (a) Industrial center size, by number of residents (1,000 people)
- (b) More than 500
- (c) Less than 10

(Branches of industry)

- 4. Electric power engineering 10. Light 5. Fuel 11. Food
- 6. Chemical and petrochemical 12. Printing
- 7. Machine building, metalworking 13. Nonferrous metals mining 8. Logging and lumbering 14. Perrous metallurgy
- 9. Building materials
- (d) Territorial combinations of natural resources
- (e) Northern link of the region (f) Southern link of the region
- (Minerals and raw-material resources)
- 15. Fuel and energy raw material 20. Mining raw material
- 16. Ferrous and alloying metals 21. Nonmetalliferous raw material
- 17. Nonferrous metals 22. Building materials 18. Rare earths 23. Timber resources
- 19. Chemical raw material 24. Agricultural land

See Table 3 for the names and descriptions of the fractional economic regions designated by Roman numerals (numerals with the A index are the region's northern link and those with the B index are its southern link).

While outlining the production cooperation of the northern and southern links of the delineated intraoblast regions in the years shead, there may be significant changes in the more remote perspective. As a result of the overall economic development of the BAM zone and the appearance of favorable economic prerequisites, the profiles of the northern links might become multifunctional, with the appearance of branches of processing industry. Under these conditions, the BAM zone itself will begin to act as a springboard, a support base for mastering the more northern regions of Siberia and the Far East.

The compensatory principle of zoning, which is based on the territorial proximity of the TransSib and the eastern BAM sector, is essentially broader in application. For example, the western BAM sector is typically farther from the Transsib, but that does not exclude the possibility of applying the compensatory principle in the economic zoning of the territory gravitating towards it. Thus, significant production and other economic ties might be established between the western sectors of the BAM zone and the more southern regions of Irkutskaya and Chitinskaya oblasts and Buryatskaya ASSR. Moreover, the possibility is not excluded of an interregional compensatory outlet to Amurskaya Oblast and the eastern zone of BAM influence as a whole, especially from Chitinskaya Oblast.

All this emphasizes the broad application of the compensatory principle of territorial economic organization in regions in the initial stages of their development and adjacent to more-developed territories. The compensatory principle enables us to "construct" a territorial division of labor and permits the long-range specialization of fractional economic regions and their interaction in a "checkerboard" pattern: initially latitudinally along the TransSib route and then, as was noted, between the southern (Trans ib area) and northern (BAM area) links, and finally latitudinally along the BAM route. Such a "checkerboard structure" of territorial economic organization facilitates the possibility of periodically combining the territorial-economic nuclei now being delineated in a balanced manner along various lines to solve major regional national-economic problems.

The interregional economic interrelationships developing among the fractional economic regions (thus far, primarily between their southern links along the TransSib, but in the future, among their northern links along the BAM) integrate the fractional regions within administrative-economic regions at the oblast level and above. Thus, in particular, the transport network configuration and the territorial division of labor which is evolving are creating prerequisites for the formation of specific circular territorial-production structures: in Amurskaya Oblast -- BAM - Tunda - Fevral'sk - Svobodnyy -- BAM (Amur ring), and in Khabarovskiy Kray -- Izvestkovaya - Urgan - Komsomol'sk-on-Amur - Khabarovsk - Izvestkovaya (Khabarovsk ring).

It appears that conditions more favorable to making the oblast and kray economies more complete will evolve at the level of these structures. Each "ring" will be able to connect the territories in a compensatory fashion with a diverse set of natural resources; the southern, economically more-developed economic links with the northern links, which are taking shape under less-favorable natural and economic conditions. The transport "rings" will in addition permit greater rolling-stock maneuverability along trunk and connecting lines. In view of the fact that the BAM is a single track, the effectiveness of transport operation will be greater if means of transport are used as a closed conveyor "revolving" in the direction of the basic freight flows along the BAM for particular combinations of freight.

Thus, the principle of shaping compensatory territorial-economic structures on the basis of different combinations of southern and northern regions can be put into practice extensively at various levels of economic and administrative-economic zoning.

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